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ABSTRACT

In the context of meeting the requirements of environmental legislation, the social change perspective is inadequate because of what is not examined. The social change perspective fails to address a crucial concept in environmental impact analysis--the concept of social cost. It is not up to the researcher to define social cost, but it is his responsibility to accurately capture and faithfully portray the evaluations of the situation made by the subject population, especially the indigenous population whose lifestyles will be altered by the industrialization of their home territory. Adopting a social cost perspective to answer the questions posed by the National Environmental Policy Act requires an expansion of the list of variables routinely used to observe rural industrialization (e.g., increased levels of divorce, drunkenness, depression, etc.). A social cost perspective also requires a shift from distributive to interactive and interpretative research strategies which allow the researcher, planner, and decision maker to go beyond the mere distribution of a social phenomenon to an understanding of the pertinent viewpoints of causation and meaning. Typically, social scientists have taken a position denying participation in the decision making process; this is an irresponsible position when used in the environmental assessment process, where a critically important end product is sound decision making for the present and future. (JC)

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A PERSPECTIVE FROM NEPA

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A PERSPECTIVE FROM NEPA*

June 1976

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RURAL INDUSTRIALIZATION AND SOCIAL COST: A PERSPECTIVE FROM NEPA*

Traditional sociological approaches to the study of rural industrialization are only partially applicable to current conditions in Montana, the Northern Great Plains, Great Basin, or Colorado Plateau where coal, oil shale, and uranium resources are being commercially developed under requirements set in federal and state environmental law. The National Environmental Policy Act (NEPA) of 1969 (PL 91-190) and companion state legislation recognize the importance of the social, cultural, and historical environments, insist these elements be systematically and thoroughly studied, and require the integration of such studies into the environmental decisionmaking process (cf. Bureau of National Affairs, 1970-1975; for a compendium of state environmental legislation). A latent consequence of this direction is an increased need to expand the traditional sets of variables which are examined in studies of rural industrialization. More importantly, there is also a demand that rural industrialization be viewed from a policy oriented perspective. The remainder of this paper will explore the gap between what environmental legislation demands in studies of rural industrialization and what has usually been given.

Traditional studies of rural industrialization are examinations of social change (cf. Bertrand and Osborne, 1959; Braschler and Hagerman, 1967; Callahan and Callahan, 1971; Clemente and Summers, 1973; Dobbs and Kiner,

*The author is indebted to Ted Clack, Lynn Brant, Gerald Mueller, and Ray Gold for their comments, suggestions, and assistance with this paper.

1974; Dynes, 1956; Garrison, 1970; Gray, 1969; Jordan, 1967; Leistritz and Hertsgaard, 1973; Maitland and Wilber, 1958; Scott, 1968; Shanks, 1974; Smith, Hogg, and Reagan, 1971; Summers et al, 1969; Wadsworth and Conrad, 1966). They begin by assuming the presence of some industrializing force acting upon a community's social condition and proceed to measure the differences in this social condition before and after industrialization. The change agent, be it a factory, power plant, or mine is taken as a given; whether the industrializing force should or should not be present in the situation is not asked. Examining the consequences of industrialization usually is undertaken using one or more of five basic categories of variables, including:

1. A demographic category - consisting of items such as population, population density and change, breakdowns by age, sex, place of residence, levels of education, and measurements of residential mobility, etc.

2. An economic category - consisting of measures of employment and unemployment, earnings and income, occupational mobility, tax base and mill levies, etc.

3. A community service category - with enumerations of school enrollments; school, county, and municipal bonding capacities, outlines of service adequacy ranging from fire and police departments to schools, libraries, sewers, and water supply systems, etc.

4. A social participation category - noting membership and participation in voluntary associations, church, union, and municipal affairs, etc.

5. An attitudinal category - measuring subject opinions and expectations toward industrialization and asking informants for observations on the effect of industrialization on personal and community life, etc.

In the context of meeting the requirements of environmental legislation, the social change perspective is inadequate because of what is not examined. The social change perspective fails to address a crucial concept

in environmental impact analysis--the concept of social cost.

Assessing social cost in situations of rural industrialization requires going beyond a description of "what's different". An assessment must be made of the desirable and undesirable outcomes of an industrializing force, the relative weight and severity of these consequent features, and whether the proposed action should be allowed to proceed. The social change perspective must give way to a perspective emphasizing social cost. As Cottrell (1951: 360) observed in his classic study, "Death by Dieselization", "Perhaps for sociological purposes we need an answer to the question, 'just who pays?'"

The social cost perspective need not be, nor interpreted as, an affront to scholarly objectivity and neutrality. Indeed, it is not up to the researcher to define social cost, but it is his responsibility to accurately capture and faithfully portray the evaluations of the situation made by the subject population, especially the native, indigenous population whose lifestyles will be altered by the industrialization of their home territory. Only in this way can research set forth answers to the questions posed by the National Environmental Policy Act. /PL 91-190; Sec. 102(c)/.

1. (What is) the environmental impact of the proposed action?
2. (What are) the adverse environmental effects which cannot be avoided should the proposal be implemented?
3. (What are) the alternatives to the proposed action?
4. (What is) the relationship between local short term uses of man's environment and the maintenance and enhancement of long-term productivity?
5. (What are) the irreversible and irretrievable commitments

of resources which would be involved in the proposed action should it be implemented?

Adopting a social cost perspective to answer the questions posed by NEPA, requires an expansion of the list of variables routinely used to observe rural industrialization. To be sure, common variables such as income and employment can be cast into a social cost mold by merely asking of them, "Is the anticipated change desirable or undesirable?" But, more is required than a mere recasting of existing variables. Studies of rural industrialization must begin to look at topics here-to-fore ignored or only tangetially reviewed such as the social pathologies of crime, suicide, alcoholism, drug abuse, and venereal disease.

Some of these items are already topics of concern in Rocky Mountain industrial development having been brought to the forefront of public knowledge by El Dean Kohrs (1974) with his studies of deviance in Gillette, Wyoming. Kohrs subsequently coined the concept "Gillette Syndrome" to refer to a constellation of "deviant" behaviors noted among persons located in rural, western boom towns. In using the concept, "Gillette Syndrome", Kohrs referred to increased levels of drunkenness, depression, delinquency, and divorce. Montana's now famous development at Colstrip, in Rosebud County, exhibits elevated levels of social pathology. From 1970 when industrial development was just beginning, to 1974 when construction and industrial activity peaked, Rosebud County showed a 1,150% increase in felonies known to police, a 529% increase in the numbers of persons receiving food stamps, and a

234% increase in cases of gonorrhea[1]. During the same time period population grew 59% to 9,578 persons.

Another area which bears more extensive examination can best be called "patterns of sociability" or community and includes topics such as the structure of community power, stratification, and influence, descriptions of local cultural values and their importance in community life, and patterns of trade and commerce. This is not a new area of inquiry for the social scientist studying rural affairs since much of the early work in the field of Rural Sociology dealt with such topics (cf. Davies, 1943; Montgomery, 1949; Rohner, 1951; Sanderson, 1938; Slocum and Case, 1953; Smith, 1942, Zimmerman, 1938). However, in the context of environmental legislation, such inquiry assumes a new level of importance. The social impact of rural industralization is often felt most keenly in the social processes of kin and friendship groups, neighboring, and sustaining community values. Studies conducted near Colstrip, Montana, point to costs inflicted upon these processes by industrial development. There, among other things, formal and informal social relationships are experiencing strain. Long time local residents have found many of their

[1]Fitzpatrick, John S., Research Unit, Office of Budget and Program Planning, Helena, Montana (unpublished data).

YEAR	OFFENSES KNOWN TO POLICE (Number of offenses)	FOOD STAMPS (Average number of persons per month)	GONORRHEA (Number of cases)	POPULATION
1970	16	86[a]	32	6,032
1971	99	142	36	N/A
1972	96	155	70	N/A
1973	155	180	81	N/A
1974	200	541[b]	107	9,578[c]

a. Four month average.
b. Nine month average.
c. Interim census. January 10, 1975.

former ties to the community ruptured by the presence of large numbers of immigrants. This, combined with the antagonism and mutual avoidance that has come to characterize relationships between those holding divergent views on development, has served to increase feelings of isolation. Many area residents report that much of the joy in life has been lost, having been replaced by fear, hostility, suspicion of former acquaintances and friends, and a sense of having to fight the whole world for survival (Gold, 1974; Clack, 1975).

Though unquantifiable, the costs experienced by Colstrip area residents are real and are important within a decisionmaking framework established with the National Environmental Policy Act. The Act specifically mandates "that presently unquantifiable environmental amenities and values be given appropriate consideration in decision making along with economic and technical considerations " /PL 91-190; Sec 102(b)/.

In addition to opening new lines of inquiry and expanding the list of variables to be examined, a social cost perspective of rural industrialization also requires a shift in research method. Most contemporary studies of rural industrialization have relied upon a "distributive" strategy of research. The term "distributive" is used because the research focus is characterized by questions on "how much" of a trait or phenomenon exists and how is it distributed in society. Obviously, distributive strategies are largely quantitative strategies.

A social cost perspective requires more than an appraisal of the distribution and variation of a social trait in rural society, or of how the trait may have changed by level or degree in a case of industrialization.

It requires that something be known about the cause and meaning of the distributed trait as seen by the indigenous, subject population.

Discovering causation focuses research on "interactive" strategies since social behavior is human action formed in relation to other men and by membership in groups. In the context of rural industrialization, an interactive strategy places attention on social processes within the rural community and its sub-groups. It asks about group values, norms, sanctions, and beliefs and seeks to understand how the natural, social community is created and sustained.

Understanding social process includes understanding "meanings". The conversion from an agrarian to an industrialized society is neither an affectively nor cognitively neutral experience. The situation's participants attach meanings to the changes they experience, imagine, or anticipate. In doing so, they define social cost. The researcher has access to these interpretations through a Verstehende Sociologie or "interpretative" strategy.

A social cost perspective incorporating the "interactive" and "interpretative" strategies allows the researcher, planner, and decision-maker to go beyond the mere distribution of a social phenomenon to an understanding of the pertinent viewpoints of causation and meaning. An end purpose of all environmental legislation is to conserve the existing natural and social environment by structuring well-reasoned change that leaves life's amenities intact. This ideal can be reached only through a well-grounded understanding of the costs of change and how to soften the burdens they impose.

Finally, the National Environmental Policy Act established a framework to "create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans". /PL 91-190; Sec. 101 (a)/

Meeting these goals is not a simple process. The decision-making process regarding the industrialization of natural resources are, ultimately, embedded in conflict situations. In Montana, the process of moving toward a decision on the application to build and operate Colstrip Generating Units #3 and #4 under provisions of the State's Major Facility Siting Act (Secs. 70-801 to 80-829, R.C.M. 1947) is a classic example of a conflict scenario structured by environmental law. The drama being played here with the Colstrip Project has been or will be repeated elsewhere in decisions over power plants, both nuclear and thermal, dams, highways, mines, and logging forest lands. Conflict is inevitable, if for no other reason than the rejection by environmental legislation of the philosophy that the public purpose is best served through private vested interest. Environmental legislation has provided a major tool for citizens' groups and units of government to confront and, perhaps for the first time, thwart plans for industrialization which, in their view, are not compatible with the public welfare.

Decision-making in any context is problematic. Conflict compounds the process further. As contesting parties jocky for position and advantage, the facts of an issue become buried in a morass of half truth, innuendo, and self-serving propaganda. Typically, social scientists have taken

an arm's length, gentleman's acceptance of the pronouncements and promises of vested interest. As scientists, the attitude has been "here are the scientific facts, accept as you will". While this approach may be defensible in purely academic research, it is irresponsible when used in the environmental assessment process, where a critically important end product is sound decisionmaking for the present and future.

Decisions to develop natural resources are not just technical exercises. They are also expressions of cultural value. For social scientists studying the processes of rural industrialization, this is especially pertinent. Industrial development is frequently portrayed as an avenue to prosperity in rural areas. Dominant cultural values define industrial development as good and beneficial to the people experiencing it (Moore, 1965: 5-6). This definition of the "good" manages to surface in all major resource development decisions. For example, in testimony before the Montana Board of Natural Resources, the State Geologist declared:

> Electricity is a key factor in moving from a recession to relative prosperity. There are jobs associated with the construction of (Colstrip) Units 3 and 4 and the transmission line, but this is just a start. Additional energy generation will be able to supply energy to old and new industry, which will retain jobs and create new jobs...Electricity is the key to Montana's economy. Without it we stagnate, with it we move forward. (Groff, 1976: 4699)

The thrust of this statement is hardly unique. It is essentially a declaration of faith. It holds that industrial development is inevitably beneficial to all concerned, social facts to the contrary notwithstanding. Indeed, evidence is continuing to mount that "rural industrialization

guarantees very little in terms of overall community improvement". (Nolan and Heffernan, 1974: 10)

Studies of rural industrialization must penetrate the myths and confusion surrounding industrialization in rural settings and determine actual consequences. Environmental legislation demands a debunking motif to "unmask the pretensions and the propaganda by which men cloak their actions". (Berger, 1963: 38) This means a systematic examination of social cost and a conscious effort to tarnish the glitter of hypothetical, promised outcomes of rural development. Put another way, research must specify what's wrong with plans to industrialize rural America and confront those who are willing to wave away the costs with a banner of promised prosperity. This is not meant to be obstructionistic. Rather, it is to base decisions about the shape of the future on a foundation of knowledge and not hope alone.

Admittedly, meeting the expectations of the National Environmental Policy Act is a large task. It requires new ways of thinking about the industrialization process especially as it pertains to rural areas. Traditional approaches have not been proving equal to the challenge posed by environmental legislation. The social cost perspective offers an opportunity to critically examine the burdens and benefits of industrialization and, ultimately, to meet NEPA's goals of "restoring and maintaining environmental quality to the overall welfare and development of man" /PL 91-190, Sec. 101(a)/.

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